

## **REMARKS**

Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks. The Office is further respectfully requested to reconsider the remarks submitted November 18, 2008. In particular, it is noted that the unialgal culture strain of the claimed invention has a characteristic of “sustainable growth without maturity” as demonstrated by the results on Tables 4 and 8 of the present specification.

### **I. CLAIM STATUS AND AMENDMENTS**

Claims 1-3 and 5-12 were pending in this application when last examined. The Examiner is respectfully requested to indicate the status of the claims in the next Office Action.

Claims 1-3 and 10-12 were examined on the merits and stand rejected.

Claims 5-9 were withdrawn. Applicants respectfully request rejoinder of the withdrawn claims upon allowance of the claims under examination.

Claim 1 is amended to include the limitations of claim 2. Further, claims 3, 7 and 12 are amended to conform with the cancellation of claims 2, 6 and 11.

Claims 2, 6 and 11 are cancelled without prejudice or disclaimer thereto.

No new matter has been added.

### **II. 35 U.S.C. § 101 REJECTION**

In items 4-5 on pages 2-4 of the Office Action, claims 1-3 and 10-12 were again rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Applicants respectfully suggest that this rejection is overcome, as applied to the amended claims, for reasons which are self-evident.

### **III. ANTICIPATION/OBVIOUSNESS REJECTION**

In items 10-14 on pages 5-7 of the Office Action, claims 1-3 and 10-12 were again rejected under 35 U.S.C. § 102(b) as anticipated by Hirota et al. or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Hirota (2000) in view of Hirota (2001).

Applicants respectfully traverse this rejection as applied to the remaining amended claims.

Applicants note that in order to expedite prosecution and without acquiescence to the correctness of the Office's position, claim 1 has been amended to recite "isolated" and to recite "wherein the isolated immaturable unialgal culture strain does not mature after storage or continuous culturing for three years or longer".

Further, claim 1 has been amended to require that the marine macroalgal of red algae belongs to the genus of *Gracilaria* sp.

Thus, Applicants note that the claimed invention is directed towards an isolated immaturable unialgal culture strain derived from spores of a marine macroalga of red algae which belongs to the genus of *Gracilaria* sp. that does not mature after three years of continuous culturing or storage. The cited references fail to teach or suggest such a unialgal culture strain. In particular, as shown in the Declaration attached to the prior response, the unialgal culture strain disclosed in Hirotaka (2000) and Hirotaka (2001) is the same as the unialgal culture strain used in Comparative Example 1. As shown in the specification and Declaration, such unialgal culture strain matured within twelve weeks. A person of skill in the art understands that alga generally wither after maturation and therefore the unialgal culture strain of the cited references is not suitable for long-term culture and storage.

As noted in the last response, Mr. Hirotaka Kakita and Dr. Hiroshi Kamishima are each an inventor of the present application, and each is a co-author of the cited references, i.e. Hirotaka (2000) and Hirotaka (2001). Hirotaka (2001) is a reviewing report of a series of experimental works directed to the effect of Muroto deep sea water on the growth of red alga, including the experimental report in Hirotaka (2000). Therefore, Mr. Kakita and Dr. Kamishima well understand the significance of the series of the works. According to the Declaration by Mr. Kakita, the unialgal culture strain used in Comparative Example 1 of the present specification is the same as those disclosed in the cited references, i.e. Hirotaka (2000) and Hirotaka (2001). As noted in the data presented in the Declaration, the unialgal culture strain of these references matures in 12 weeks. Thus, such strain does not have the same properties as the claimed strain. Thus, the above-noted rejections are untenable.

Applicants further note that the culture strain in Example 2 possesses the characteristics required by the claimed invention, i.e. "does not mature after storage or continuous culturing for three years or longer", and the culture strains in Comparative Examples 1 and 2 do not possess

such characteristics. Support for the contention can be found in the present specification. That is, the aforementioned limitation is described in paragraphs [0001] and [0019] of the present specification and the experiments indicated in the Declaration are identical to the evaluation test (5) on pages 15-17 and the evaluation test for absorption of nutritional salts shown on pages 23-24 of the present specification.

Thus, Applicants respectfully suggest that the cited references fail to teach either explicitly or inherently an isolated immaturable unialgal culture strain derived from spores of a marine microalgae of red algae which belongs to the genus of *Gracilaria* sp. with the claimed characteristics and wherein the isolated immaturable unialgal culture strain does not mature after storage or continuous culturing for three years or longer. Such contention is supported by the Declaration submitted with the reply of November 18, 2008. In particular, the Declaration shows that the algal strains cited in the asserted art do not possess these characteristics. Applicants further note that since the claim amendments in the November 18, 2008 response as well as the preliminary amendments in this response have been entered, the Declaration is now commensurate in scope with the claimed invention.

Applicants further note that in the Advisory Action, it appears that the Office contends that the unialgal strain described in the specification was not substantially different from the unialgal strains of the cited art. Applicants respectfully disagree.

As noted previously, in the Final Office Action paragraph 12, the Examiner alleges that Hirotaka (2001) teaches continuous cultivation of a unialgal culture strain as a stock unialgal culture strain, making reference to the passage from the English translation of the IPRP (page 4, lines 3-1 from the bottom). As noted in the Declaration, “continuous cultivation” described in Hirotaka (2001) means a so-called “stock culture” which is a standard technique for preparing a unialgal culture strain for use in evaluation tests. Such corresponds to steps (3) and (4) in paragraphs [0048] and [0049] of the present specification. Further cultivation from the obtained unialgal culture strain as stated in the English translation of the IPRP is not practical since it takes about 200 days to obtain a unialgal culture strain [see the steps (1)-(4) in Example 2 of the present specification].

It is noted that to a person of skill in the art, the stock culture is an optional step of keeping an upright body standing and stored under a slow growth or non-growing culture condition such as low nutrition, low temperature and low light intensity as indicated in paragraph

[0032] of the present specification. Such stock culture step is conducted when it is desirable to temporarily stop or retard the growth of an upright body ([0032]). However, in the present invention, stock culture is conducted for another reason, i.e. for the removal of adhering algae (i.e., epiphytes) attached to an upright body, since the stock culture condition is unfavorable for epiphytes.

The upright body kept under such a stock culture condition must be then cultivated under a normal culture condition for 2-4 weeks to obtain a unialgal culture strain (see [0007] of the present specification). The total cultivation length including a stock culture step is about 200 days [see steps (1)-(4) in Example 2].

On the other hand, the claimed culture strain is ready for evaluation tests any time by cutting off the necessary portion from the algal body. Such claimed strain is therefore not the same as the stock culture of the prior art.

For the above-noted reasons, these rejections, as applied to the amended claims are untenable and should be withdrawn.

**CONCLUSION**

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and early notice to that effect is hereby requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,

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